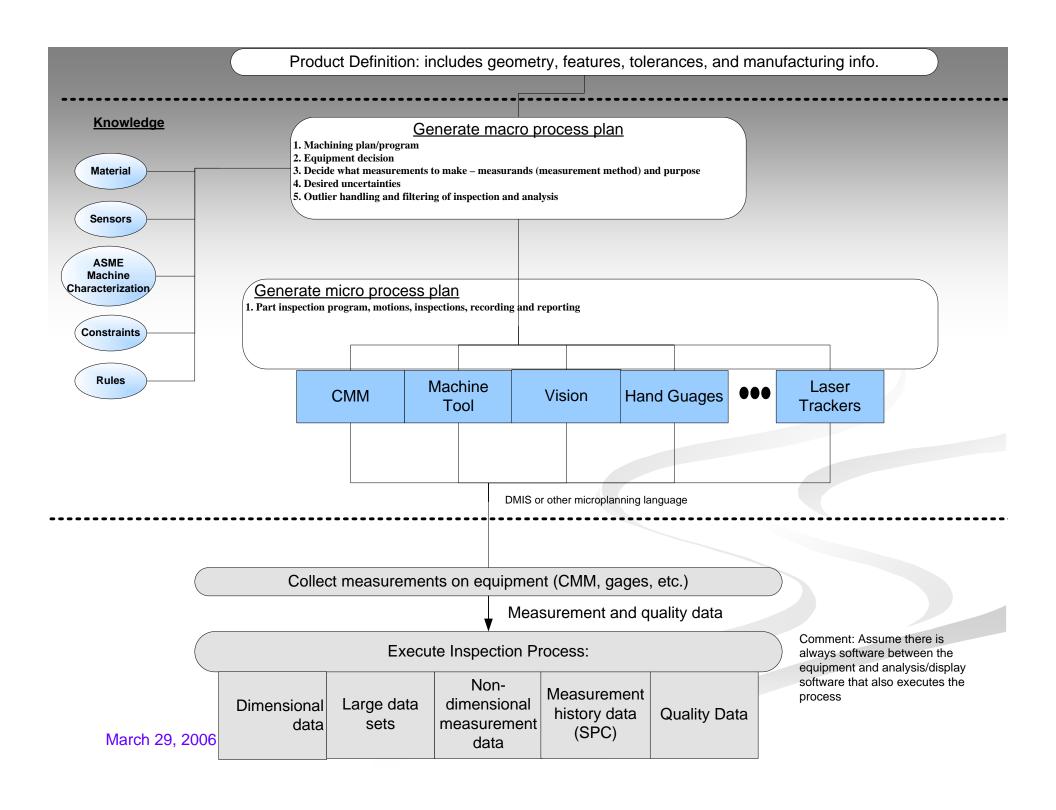
Process Definition

Cory Leland

Process Definition Team

- Ken Sheehan
- Dave Marlow
- Carol Malone
- Ray Admire
- Jess Crusey
- Larry Maggiano
- Rob Edgeworth
- Murray Desnoyer
- Al Wavering

- Tim Taylor
- Andy Smith
- John Wootton
- Cory Leland
- Kalyan Bhamidi
- Helen Guixiu Oiao
- Art Whistler
- Robert Callaghan
- Doug Sponseller
- Curtis Brown



Key Findings for the Current State

- We are measuring, not just inspecting
 - Process control, conformance to tolerance, product design and development, and calibration
- Lack of digital form of measuring system capabilities performance, uncertainty, configuration
- Tolerance definitions incomplete, inaccurate, wrong, ambiguous with no change capability or associativity back into CAD product design.
- No standard digital form of manufacturing and inspection rules/knowledge – now just a lot of cut and paste
- Lack of DMIS compatibility and (interactive and/or static) conformance classes.

Vision

- Product definition data from any CAD/CAM system run on any CMM/Measuring Equipment appropriate to requirements
- Represent results back to CAD
- Accessible and extendible knowledge base not invisible/lost in black box
- Auto process/program generation
- Standard graphical representation of deviation
- Retain representation of raw data throughout manufacturing life cycle and lossless compression
- Keep all data all the time, forever
- Results feedback into process planning at different timescales to optimize measurements
- Link Everything back into enterprise content management (beyond PDM)
- Cost predictive tool design for manufacturability, tolerance for inspectability (ABC, history based)

Issues

- Lack of CAD vendor interest
- Parts that don't have CAD models
- Culture change necessary to align design/manufacturing/measure
- How comprehensive should the scope of our efforts be?
- Addressing needs of small manufacturers
- Education and lack of knowledge
- Understandability/unambiguous of standards and units

"To Be" Activity Diagram

Measure